BS in Pharmaceutical Sciences

Degree Requirements

Code	Title	Hours
Summary of Requirements		
Pre-Pharmaceutical Sciences Requirements		58-60
Major Requirements (Core and Selective)		50-52
Electives to Reach Minimum Hours		8-12
Total Hours		**120**

Pre-Pharmaceutical Sciences Requirements

Code	Title	Hours
Required Courses		
ENGL 160	Academic Writing I: Writing in Academic and Public Contexts	3
Select one of the following writing courses:		3
ENGL 161	Academic Writing II: Writing for Inquiry and Research	
HUM 120	Engaged Humanities: Understanding the Individual and Society	
Select one of the following general chemistry sequences:		10
CHEM 122 & CHEM 123	Matter and Energy and Foundations of Chemical Inquiry I [b]	
CHEM 124 & CHEM 125	Chemical Dynamics and Foundations of Chemical Inquiry II [b]	
OR		
CHEM 116 & CHEM 118	Honors and Majors General and Analytical Chemistry I and Honors and Majors General and Analytical Chemistry II	
Select one of the following:		3
COMM 100	Fundamentals of Human Communication [a]	
COMM 102	Introduction to Interpersonal Communication [a]	
BIOS 110	Biology of Cells and Organisms [c]	4
BIOS 120	Biology of Populations and Communities [c]	4
CHEM 232	Structure and Function	3
CHEM 233	Synthesis Techniques Laboratory	2
CHEM 234	Chemical Synthesis	3
Select one of the following:		3-4
PHYS 118	Physics in Modern Medicine [c]	
PHYS 131	Introductory Physics for Life Sciences I [c]	
PHYS 141	General Physics I (Mechanics) [c]	
Select one of the following:		4-5
MATH 165	Calculus for Business [c]	
MATH 170	Calculus for the Life Sciences [c]	
MATH 180	Calculus I [c]	
Select one of the following:		4
STAT 101	Introduction to Statistics	
STAT 130	Introduction to Statistics for the Life Sciences	
PHAR 200 and PHAR 201 should be completed by UIC students before admission to the program.		
Four General Education courses [d]		12
Total Hours		**58-60**

a *This course is approved for the Understanding the Individual and Society General Education category.*

b *Each of the following pairs will be considered one course in meeting the Analyzing the Natural World General Education category: CHEM 122/CHEM 123, CHEM 124/CHEM 125.*

c *This course is approved for the Analyzing the Natural World General Education category.*

d *All students need to complete UIC General Education requirements (i.e., students must earn a minimum of 24 hours of General Education credit with at least one course in each of six categories: Analyzing the Natural World, Understanding the Individual and Society, Understanding the Creative Arts, Understanding the Past, Understanding US Society, and Exploring World Cultures). The General Education section of the catalog lists courses that fulfill each category. UIC students may need to complete some General Education courses after admission to program.*

Pharmaceutical Sciences Major Requirements

Code	Title	Hours
Required Core Courses		
BIOS 350	General Microbiology	3
BIOS 351	Microbiology Laboratory	2
Select one of the following:		3
BIOS/CHEM 352	Introductory Biochemistry	
BIOS/CHEM 452	Biochemistry I	
Select one of the following anatomy and physiology sequences:		8-10
KN 230 & KN 231 & KN 232 & KN 233	Anatomy and Physiology Lecture I and Anatomy and Physiology Lecture II and Anatomy and Physiology Laboratory I and Anatomy and Physiology Laboratory II	
KN 253 & KN 254	Human Anatomy and Physiology I and Human Anatomy and Physiology II	
Select one of the following (3 hours total): [a]		3
PSCI 300	Undergraduate Research Experience in Pharmaceutical Sciences	
PSOP 300	Undergraduate Research Experience in Pharmacy Systems, Outcomes and Policy	
PMPR 300	Undergraduate Research Experience in Pharmacy Practice	

PHAR 200	Introduction to Pharmaceutical Sciences [b]	3
PHAR 201	Pharmaceutical Care in the US [b]	3
PHAR 410	Integrated Physiology	3
PHAR 422	Fundamentals of Drug Action	4
PHAR 423	Fundamentals of Drug Action II	4
PHAR 431	Pharmaceutics I - Pharmaceutics Principles, Drug Delivery Systems, and Calculations	3
PHAR 432	Pharmaceutics II – Pharmaceutical Dosage Forms and Calculations	2
PHAR 435	Pharmacokinetics	3
PHAR 438	Introduction to Drug Information	1
PHAR 461	Pharmacy and the U.S. Healthcare System	2
Select one of the following (3 hours minimum):		3
BIOS 220	Genetics	
BIOS 416	Natural Products	
BIOS 450	Advanced Microbiology	
BIOS 458	Biotechnology and Drug Discovery	
Total Hours		**50-52**

a *Students must earn 3 hours in a single course, but may earn the credit over multiple semesters.*

b *Non-UIC students will complete PHAR 200 and PHAR 201 after admission to the BS in Pharmaceutical Sciences. UIC students who plan to apply to the BS should complete PHAR 200 and PHAR 201 before admission to the program.*

Electives

Code	Title	Hours
Electives		
Select elective courses to reach minimum total hours.		8-12
Total Hours		**8-12**

Sample Plan of Study

Course	Title	Hours
First Year		
Fall Semester		
ENGL 160	Academic Writing I: Writing in Academic and Public Contexts [a]	3
One of the following:		5
CHEM 122 & CHEM 123	Matter and Energy and Foundations of Chemical Inquiry I [a]	
CHEM 116	Honors and Majors General and Analytical Chemistry I	
COMM 100	Fundamentals of Human Communication [a]	3
Exploring World Cultures General Education course [a]		3
	Hours	**14**
Spring Semester		
ENGL 161 or HUM 120	Academic Writing II: Writing for Inquiry and Research [a] or Engaged Humanities: Understanding the Individual and Society	3
One of the following:		5
CHEM 124 & CHEM 125	Chemical Dynamics and Foundations of Chemical Inquiry II [a]	
CHEM 118	Honors and Majors General and Analytical Chemistry II	
BIOS 110	Biology of Cells and Organisms [a]	4
Understanding the Creative Arts General Education course [a]		3
	Hours	**15**
Second Year		
Fall Semester		
PHAR 200	Introduction to Pharmaceutical Sciences [b]	3
CHEM 232	Structure and Function	3
BIOS 120	Biology of Populations and Communities [a]	4
MATH 170	Calculus for the Life Sciences [a]	4
	Hours	**14**
Spring Semester		
CHEM 233 & CHEM 234	Synthesis Techniques Laboratory and Chemical Synthesis	5
STAT 130	Introduction to Statistics for the Life Sciences	4
PHAR 201	Pharmaceutical Care in the US [b]	3
PHYS 131	Introductory Physics for Life Sciences I [a]	4
	Hours	**16**
Third Year		
Fall Semester		
BIOS 350 & BIOS 351	General Microbiology and Microbiology Laboratory	5
BIOS 352	Introductory Biochemistry	3
KN 253	Human Anatomy and Physiology I	4
PSCI 300 or PSOP 300 or PMPR 300	Undergraduate Research Experience in Pharmaceutical Sciences or Undergraduate Research Experience in Pharmacy Systems, Outcomes and Policy or Undergraduate Research Experience in Pharmacy Practice	1
Understanding the Past General Education course		3
	Hours	**16**
Spring Semester		
KN 254	Human Anatomy and Physiology II	4
BIOS 220 or BIOS 416 or BIOS 450 or BIOS 458	Genetics or Natural Products or Advanced Microbiology or Biotechnology and Drug Discovery	3
PSCI 300 or PSOP 300 or PMPR 300	Undergraduate Research Experience in Pharmaceutical Sciences or Undergraduate Research Experience in Pharmacy Systems, Outcomes and Policy or Undergraduate Research Experience in Pharmacy Practice	2
Understanding U.S. Society General Education course [a]		3
Elective		4
	Hours	**16**
Fourth Year		
Fall Semester		
PHAR 410	Integrated Physiology	3
PHAR 422	Fundamentals of Drug Action	4
PHAR 431	Pharmaceutics I - Pharmaceutics Principles, Drug Delivery Systems, and Calculations	3
PHAR 435	Pharmacokinetics	3
Elective		3
	Hours	**16**
Spring Semester		
PHAR 423	Fundamentals of Drug Action II	4
PHAR 432	Pharmaceutics II – Pharmaceutical Dosage Forms and Calculations	2
PHAR 438	Introduction to Drug Information	1
PHAR 461	Pharmacy and the U.S. Healthcare System	2
Elective		4
	Hours	**13**
	Total Hours	**120**

a *Fulfills General Education Requirements.*
b *Transfer students may take PHAR 200 and PHAR 201 during their third year, if necessary.*

BSPS/PharmD Pathway

BSPS students may apply to the PharmD Program during their third undergraduate year. In the BSPS/PharmD Pathway, students can complete the BSPS and PharmD Program in seven years, since there are 22 hours of coursework that are shared between the two degrees. Students in the BSPS/PharmD Pathway receive their BSPS degree upon completion of 120 hours at the end of their first year of the PharmD Program.

Fourth Year Sample Plan of Study for the BSPS/PharmD Pathway

Code	Title	Hours
Fourth Year		
FALL SEMESTER		
PHAR 410	Integrated Physiology	3
PHAR 411	Introduction Pharmacy Practice	4
PHAR 422	Fundamentals of Drug Action	4
PHAR 431	Pharmaceutics I - Pharmaceutics Principles, Drug Delivery Systems, and Calculations	3
PHAR 435	Pharmacokinetics	3
PHAR 465	Pharmacy Learning, Advising, Mentoring, and Engagement for Students (PhLAMES) 1	0
Electives		0-1
Total Hours		**17-18**

Code	Title	Hours
Fourth Year		
SPRING SEMESTER		
PHAR 412	Introductory Pharmacy Practice (IPPE): Community	2
or PHAR 413	Introductory Pharmacy Practice Experience (IPPE): Hospital	
PHAR 423	Fundamentals of Drug Action II	4
PHAR 432	Pharmaceutics II – Pharmaceutical Dosage Forms and Calculations	2
PHAR 438	Introduction to Drug Information	1
PHAR 461	Pharmacy and the U.S. Healthcare System	2
PHAR 466	Pharmacy Learning, Advising, Mentoring, and Engagement for Students (PhLAMES) 2	0
PHAR 501	Pathophysiology, Drug Action, and Therapeutics (PDAT) 1: Self Care	3
PHAR 502	Pathophysiology, Drug Action, and Therapeutics (PDAT) 2: GI/Endocrine	3
Electives		0-1
Total Hours		**17-18**